

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference R 44572	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/AT2004/000439	International filing date (<i>day/month/year</i>) 14.12.2004	Priority date (<i>day/month/year</i>) 15.12.2003
International Patent Classification (IPC) or national classification and IPC B23K9/12, B23K26/14, B23K28/02, B23K9/167, B23K9/173		
Applicant FRONIUS INTERNATIONAL GMBH		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>8</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input checked="" type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-15 as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. 1-22 as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* _____ received by this Authority on _____
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets 1/11-11/11 as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	2-13, 15-22	YES
	Claims	1, 14	NO
Inventive step (IS)	Claims		YES
	Claims	1-22	NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
Reference is made to the following documents:			
D1: DE 44 36 084 A1 (MERCEDES-BENZ AKTIENGESSELLSCHAFT, 70327 STUTTGART, DE) 15 February 1996 (1996-02-15)			
D2: WO 00/64620 A (FRONIUS SCHWEISSMASCHINEN PRODUKTION GMBH & CO. KG; ARTELSMAIR, JOSEF) 2 November 2000 (2000-11-02)			
D3: WO 97/45227 A (FRONIUS SCHWEISSMASCHINEN KG AUSTRIA; ARTELSMAIR, JOSEF; KEPPLINGER, M) 4 December 1997 (1997-12-04)			
D4: GB-A-1 502 288 (AKADEMIET FOR DE TEKNISKE VIDENSKABER SVEJSECENTRALEN) 1 March 1978 (1978-03-01)			
D5: US-A-4 806 735 (DITSCHUN ET AL) 21 February 1989 (1989-02-21)			
D6: FR-A-2 829 413 (L'AIR LIQUIDE SOCIETE ANONYME POUR L'ETUDE ET L'EXPLOITATION DES PROCE) 14 March 2003 (2003-03-14)			
D7: DE 102 17 678 A1 (FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V) 6 November 2003 (2003-11-06)			
/...			

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>D8: GB-A-1 476 980 (FAGERSTA AB) 16 June 1977 (1977-06-16)</p> <p>D9: MOREHEAD T: "AUTOMATIC MULTIWIRE GMAW MULTIPLIES PRODUCTIVITY DOUBLING WELDING WIRES CAN MORE THAN DOUBLE PRODUCTION LINE THROUGHPUT", WELDING JOURNAL, AMERICAN WELDING SOCIETY, MIAMI, US, vol. 82, no. 6, June 2003 (2003-06), pages 40-43, XP001177380 ISSN: 0043-2296.</p> <p>1. The present application fails to satisfy the requirements of PCT Article 33(1) because the subject matter of claims 1 and 14 lacks novelty (PCT Article 33(2)). Each of documents D1, D3, D4, D5, D6, D7, D8 and D9 discloses a welding unit or a welding method as per claim 1 and claim 14 respectively.</p> <p>It should be noted that the second welding torch in the welding units according to D1, D3, D4, D5, D6, D7, D8 and D9 is suitable for carrying out a cold metal transfer welding process.</p> <p>It should also be noted that a MIG/MAG welding torch configured with a back-and-forth motion of a welding wire, for example for igniting the electric arc or for carrying out a cold metal transfer welding process, as per the description of the present application is</p> <p style="text-align: right;">/...</p>

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>known from D2 (page 7, lines 25-35) or D2 (pages 7-11; and figures 3 to 5).</p> <p>The subject matter of claims 1 and 14 is therefore not inventive over documents D1, D3, D4, D5, D6, D7, D8 or D9 in combination with D2.</p> <p>2. Dependent claims 2 to 13 and 15 to 22 do not contain any features which, in combination with the features of any claim to which they refer back, meet the PCT requirements for novelty and inventive step. The reasons are as follows:</p> <p>2.1 The subject matter of claims 2 and 15 is known from documents D1, D3 to D7 and D9.</p> <p>2.2 The subject matter of claims 3 and 16 is known from documents D1 and D8.</p> <p>2.3 The subject matter of claims 4 and 17 is known from documents D1, D3 to D7 and D9.</p> <p>2.4 The subject matter of claims 5 and 18 is known from documents D1, D3 to D7 and D9.</p> <p>2.5 The subject matter of claims 6 and 19 is known from documents D6 and D7.</p> <p>2.6 The subject matter of claims 7 and 20 is known from documents D1, D3 D5, D8 and D9.</p> <p style="text-align: right;">/...</p>

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
2.7	The subject matter of claim 8 is known from documents D1, D3 to D5, D8 and D9.
2.8	The subject matter of claim 4 is known from document D4.
2.9	The subject matter of claim 10 is known from documents D3, D6, D8 and D9.
2.10	The subject matter of claim 11 is known from documents D1, D3, D4 to D6, D8 and D9.
2.11	The subject matter of claims 12 and 13 is known from documents D4 and D5.
2.12	The subject matter of claims 21 and 22 is known from D3 and D5.

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Box No. VII **Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

1. Contrary to PCT Rule 5.1(a)(ii), the description does not cite documents D1 to D9 or indicate the relevant prior art disclosed therein.

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. The expression "cold metal transfer", used in claims 1, 5, 6, 14, 18 and 20, is vague and lacks clarity, leaving the reader uncertain as the meaning of the technical features in question. In consequence, the definition of the subject matter of said claims lacks clarity (PCT Article 6). It should be noted that the description (see the application, page 9) describes a cold metal transfer welding process.